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			EXAMINER SHERMAN, STEPHEN G	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/748,686	Applicant(s) FITZMAURICE ET AL.	
	Examiner Stephen G. Sherman	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 is/are allowed.
- 6) ☒ Claim(s) 1-25 and 27-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 June 2007 has been entered.

Response to Arguments

2. Applicant's arguments filed with respect to the rejection of claims 1-4, 6-11, 15-20, 23-25 and 27-30 with respect to Selker, Keely, Jr. et al., Kurtenbach, and Anderson have been fully considered but they are not persuasive.

The applicant's arguments begin on page nine of the response, in which the applicant argues that Selker says nothing about locating a menu with controls based on a natural motion of a user. The examiner respectfully disagrees. The motion arc of the user is not actually being done in the claims. The motion arc is only used as a reference point as to the location of the interface. As explained below in the rejection, the interface menu taught by Selker can be located anywhere on the display screen.

Thus Selker covers any location that an interface can possibly be located. Therefore, Selker teaches of the menu being located on the display in a position that would be responsive to the natural motion as claimed. Just because Selker does not state that this is the purpose of his invention does not mean that his interface does not correspond to a natural motion path of the user.

The applicant then argues on page 10 of the response that the “fixed menus” of Selker are not persistent but rather are “time invariant”, and give the definition of persistent. The examiner would like to point out that the applicant has proven that Selker’s menu is persistent. The definition of persistent given by the applicant states “existing for a long or longer than usual time or continuously”. Since a fixed menu exists all the time (See Selker paragraph [0046]), it exists continuously and thus is persistent. Paragraph [0006] does not state anything about persistent meaning “time-invariant” nor does it state anything about whether the menu is fixed or not. Paragraph [006] only states that “what is needed is a distance and time invariant arrangement”. This paragraph is located in the prior art discussion and has nothing to do with whether the menu is a pop-up menu or not. The examiner relied upon paragraph [0046] for the rejection, which states that the menu could be a fixed menu, which means that it would be persistent, i.e. would exist continuously. If the applicant has an alternative meaning other than the menu being fixed, then it should be added to the claim, otherwise, Selker teaches the limitation.

The applicant then states on page 10 of the response that the circular shape of the pie menu taught by Selker is not an arc shaped graphic. The examiner respectfully

disagrees. The outer surface of a circle contains arcs. Thus a circle is “arc shaped” since it contains arcs around its surface. It is apparent that the applicant has even meant for “arc shaped” to encompass a circle since claim 11 states: “wherein the interface is located in a lower left corner of a display area and the controls of the interface are arranged as one of a convex arc...**a rotatable circle intersecting both sides of the corner**”. Thus a circle can be considered an arc **shaped** graphic.

The applicant then argues on page 10 that the circles of Selker are multiple hierarchical pie menus with menu items, whereas the interface of claim 1 includes controls that initiate an action. The applicant is apparently under the impression that the menu of Selker is only provided for decoration and that not of the menu items will ever perform a function. Contrary to this belief by the applicant, paragraph [0035] of Selker specifically states: “For example, menu items 11, 12, 13 and 14 are “cut”, “copy”, paste”, and “delete”. When a user actuates a menu item such as “delete”, the action of deleting will take place, which is common since menus in a GUI usually provide the user with controls for initiating actions, such as deleting in this particular case.

The applicant then states that paragraph [0046] of Selker does not say that the menu can be located anywhere on the display. The examiner disagrees. Paragraph [0046] states “The present invention should not be limited by size, shape, **position on a computer display**, number of levels...”. Thus any position on the display that the menu could possibly be is covered by Selker, meaning that Selker teaches of the menu being in the lower left-hand corner of the display.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-25 and 27-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-25 and 27-32 all recite the limitation “an arc shaped persistent graphic defining the interface area where the arc is substantially perpendicular to a natural motion path of the natural motion.” This limitation is not fully described in the specification because the specification only describes that the arc shaped persistent graphic is located in a lower corner of the display (see Figure 5). Thus the limitation is only supported if the natural motion path starts in the corner or near the corner of the display area. If a user makes their natural motion arc higher on the display, then the arc shaped persistent graphic would not be substantially perpendicular to the natural motion path. The limitation is subjective, and the specification only describes the arc shaped persistent graphic being located in a corner responsive to a motion path that starts in the corner, whereas the claim is broadly trying to encompass more than what is

described in the specification. Therefore, the limitation is not supported by the specification.

Furthermore, claim 32 also recites: "a first graphical user interface located responsive to a natural motion by a user associated with a first end of a range of the natural motion; and second graphical user interface located responsive to the natural motion by a user associated with a second end of the range of the natural motion; and said first and second graphical user interfaces each comprising: an arc shaped persistent graphic defining the interface area where the arc is substantially perpendicular to a natural motion path of the natural motion; and controls initiating an action, located in the interface area and accessible via the natural motion" which is not described in the specification. The specification only shows one interface menu located at an end range of a user motion that is perpendicular to the motion arc. The specification does not have support for a second menu being located at the other end also being perpendicular. The specification explains of a pop-up circular menu, however, this menu is not at the other end of the user motion range. The specification also explains of an overflow menu being located on the natural motion arc, however, this menu is not perpendicular to the natural motion arc. Thus, the specification does not contain support for the limitations of claim 32.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "...having graphics for controls arranged along the interface arc and having control hit zones each with a zone shape responsive to an approach arc defined by a dominant motion arc of a motion of a user and associated with an end of a range of a natural motion by a user where the arc is substantially perpendicular to a natural motion path of the natural motion..." The claim is indefinite because it is completely unclear which arc is being referred to in the limitation "where the arc is substantially perpendicular to a natural motion path of the natural motion". Thus the examiner cannot possibly know whether the claim is referring to the interface arc, the approach arc or the dominant motion arc.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-9, 11, 21 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Selker (US 2002/0122072).

Regarding claim 1, Selker discloses an interface, comprising:

a graphical user interface area located responsive to a natural motion by a user associated with an end of a range of the natural motion (Paragraph [0046] states “The present invention should not be limited by size, shape, position on a computer display, number of levels...”. Thus the position of the arc shaped menu of Figure 2 could be anywhere on the screen, which covers the limitation that the graphical user interface area is located responsive to a natural motion by a user associated with an end range of the natural motion.) and, comprising:

an arc shaped persistent graphic (Figure 2 shows the menu which is circular. The outer circumference of a circle is defined by arcs and thus, a circular shaped menu is “arc shaped”. Paragraph [0046] explains that the menu can be fixed, i.e. persistent.) defining the interface area where the arc is substantially perpendicular to a natural motion path of the natural motion (As explained above, paragraph [0046] explains that the menu can be placed anywhere on a display. Thus there will be positions on the display in which the outer arc of the menu will be at a right angle with the natural motion arc of a user.); and

controls initiating an action located in the interface area and accessible via the natural motion (Figure 2 shows that the interface area defined by areas 11-14 and 21-24, which are controls, are accessible via the natural motion of a user. Figure 2 is explained in paragraphs [0035] and [0036]. Menus contain menu selection items as explained in paragraph [0035]. Paragraph [0035] further explains that the menu

selection items, i.e. controls, could be ones such as “cut”, “copy”, “paste” and “delete”, which initiate the action of cutting, copying, pasting and deleting when selected. Thus the controls initiate an action.).

Regarding claim 2, Selker discloses an interface as recited in claim 1, wherein the natural motion is a curve associated with movement of a hand of the user when an elbow of the user is pivoted (When anyone places their elbow on a surface, they will produce a natural motion curve, and as explained above, paragraph [0046] states “The present invention should not be limited by size, shape, position on a computer display, number of levels...”. Thus the position of the arc shaped menu of Figure 2 could be anywhere on the screen, which covers the limitation that the graphical user interface area is located responsive to a natural motion by a user associated with an end range of the natural motion, where the natural motion is a curve associated with movement of a hand of the user when an elbow of the user is pivoted.).

Regarding claim 3, Selker discloses an interface as recited in claim 2, wherein a location responsive to the natural motion of the user hand is defined by the natural motion passing through a substantial center area of a display area (Paragraph [0046] explains that the position on the display of the menu is not limited meaning that the interface could be located somewhere with respect to a user’s hand passing through a center of the display.).

Regarding claim 4, Selker discloses an interface as recited in claim 1, wherein the natural motion is a curve associated with movement of a hand of the user when an elbow of the user is pivoted and one of a wrist of the user is rotated and fingers of the user are moved (Please refer to the rejection of claim 2, where if the user's entire arm past the elbow is moving then the wrist and fingers are moved as well.).

Regarding claim 5, please refer to the rejection of claim 1, and furthermore since paragraph [0046] states "The present invention should not be limited by size, shape, position on a computer display, number of levels...", the position of the arc shaped menu of Figure 2 could be anywhere on the screen such as in a lower corner, which covers the limitation that the interface location responsive to the natural motion of the user is a lower corner of a display area.

Regarding claim 6, Selker discloses an interface as recited in claim 1, wherein the graphic is a shape corresponding to an arc shaped curve and the controls are positioned in accordance with the curve (Figure 2).

Regarding claim 7, Selker discloses an interface as recited in claim 6, wherein a radius of the arc shaped curve is at least a radius of a menu of one of the controls (Figure 2).

Regarding claim 8, Selker discloses an interface as recited in claim 6, wherein a control closest to a display area is positioned along the curve at least a radius of a menu of the control from a display edge (Figure 2 and paragraph [0046]).

Regarding claim 9, Selker discloses an interface as recited in claim 1, wherein a menu associated with one of the controls has a layout responsive to the curve (Figure 2).

Regarding claim 11, Selker discloses an interface as recited in claim 1, wherein the interface is located in a lower left corner of a display area (Paragraph [0046] explains that the location can be made to be anywhere, meaning that the location could be the lower left corner of the display.) and the controls of the interface are arranged as one of a convex arc across the corner, a concave arc across the corner, a line across the corner, an array in the corner, a convex corner across the corner, a convex arc with a linear portion across the corner, a sectioned pie in the corner, a sectioned pie in the corner and extending across the display area, and a rotatable circle intersecting both sides of the corner (Figure 2 shows that the menu items are located along the arc of the circle.).

Regarding claim 21, this claim is rejected under the same rationale as claim 5.

Regarding claim 31, please refer to the rejection of claim 1, and furthermore since paragraph [0046] states “The present invention should not be limited by size, shape, position on a computer display, number of levels...”, the position of the arc shaped menu of Figure 2 could be anywhere on the screen such as in a corner so that the display edge would intersect the circular edge, which covers the limitation of “a fixed position, semicircular shaped, display edge intersecting menu bar interface graphic”.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 20, 23-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keely, Jr. et al. (US 6,337,698) in view of Selker (US 2002/0122072).

Regarding claims 20 and 27, Keely, Jr. et al. disclose a method and a computer readable storage for controlling a computer comprising:

mapping controls of an graphical user interface in an arc shape (Figs. 10-12) at a corner location responsive to an approach arc associated with an end of a range of a natural user motion (Column 7, lines 10-12 and Fig. 10, line 142, see col. 6, lines 39-40, where a motion arc of a user is shown for selecting one of the menu items, and as shown the menu is placed responsive to the range of a user's natural motion to be able to select the menu items.) and with a radius responsive to an underlying menu (Figs. 10-12, the radius of the user's approaching stroke is the radius of the menu) activatable via one of the controls (Figs. 10-12, where the menu is activated by using the controls) and where the arc is substantially perpendicular to a natural motion path of the natural motion (Figures 10-12 show that the menu arc is substantially perpendicular to the natural motion arc of the user.); and

allowing a user to activate the controls (see col. 6, lines 39-40).

Keely, Jr. et al. fail to teach that the interface is persistent.

Selker discloses of a graphical user interface wherein a persistent interface has an arc shape (Figure 2 and paragraph [0046] explain that the interface can be fixed, while Figure 2 shows that the menu has an arc shape.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to make the interface taught by Keely, Jr. et al. be a fixed interface as taught by Selker et al. in order to provide for easy accessibility to the menu

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items used more frequently and to allow the user to constantly see the options of the menu.

Regarding claim 23, Keely, Jr. et al. and Selker disclose a method as recited in claim 20.

Keely, Jr. et al. also disclose wherein the mapping maps controls on the arc responsive to a function of the controls (Fig. 10, the controls are mapped onto the arc-shaped menu according to their function).

Regarding claim 24, Keely, Jr. et al. and Selker disclose a method as recited in claim 20.

Keely, Jr. et al. also disclose the method further comprising minimizing the interface responsive to activation of a minimize control (see col. 7, lines 51-57, where the pen leaving the surface activates the palette to be toggled off the screen, which is a form of minimizing it).

Regarding claim 25, Keely, Jr. et al. and Selker disclose a method as recited in claim 20.

Keely, Jr. et al. also disclose:

displaying a menu upon a touch input (see col. 6, lines 54-55) and allowing a user to select an item of the menu (Fig. 10, shows the path a user takes to select an item);

displaying a menu and performing an interaction upon a dwell input (col. 7, lines 50-57, where the pen leaving the surface can minimize the menu therefore allowing the pen to dwell on the surface allows the user to interactively maintain the display of the menu); and

performing a function upon a stroke input (col. 7, lines 27-30, where the user makes a selection via a stroke input).

Regarding claim 28, Keely, Jr. et al. disclose an apparatus, comprising:

a display (Fig. 11 shows a display); and

a processor (col. 3, line 50, where a computer has a processor) positioning a graphical user interface of multiple controls in a lower corner of the display associated with an end of a range of a natural user motion (see col. 7, lines 10-12, where the processor is inherently involved in positioning the menu in the corner, and as shown in Figure 10-12 the menu is placed responsive to the range of a user's natural motion to be able to select the menu items.),

the interface having an interface arc shape (Fig. 10) where the arc is substantially perpendicular to a natural motion path of the natural motion (Figures 10-12 show that the menu arc is substantially perpendicular to the natural motion arc of the user.) and

positioning the controls on the interface arc at positions responsive to a natural motion arc of a user when moving a hand from a center of the display toward the corner (Fig. 10, line 142, see col. 6, lines 39-40, where there is a motion made from the center

of the menu, which is towards the center of the display when the menu is in the corner, toward the corner).

Keely, Jr. et al. fail to teach that the interface is persistent.

Selker discloses of a graphical user interface wherein a persistent interface has an arc shape (Figure 2 and paragraph [0046] explain that the interface can be fixed, while Figure 2 shows that the menu has an arc shape.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to make the interface taught by Keely, Jr. et al. be a fixed interface as taught by Selker et al. in order to provide for easy accessibility to the menu items used more frequently and to allow the user to constantly see the options of the menu.

Regarding claim 29, Keely, Jr. et al. and Selker disclose an apparatus as recited in claim 28.

Keely, Jr. et al. also disclose wherein the processor positions the controls responsive to a function of the controls (Fig. 10, where the controls are displayed according to their function, that being of displaying a certain color, and their positioning is inherently performed by the processor).

Regarding claim 30, Keely, Jr. et al. and Selker disclose an apparatus as recited in claim 28.

Keely, Jr. et al. also disclose an apparatus further comprising a stylus-based input system coupled to the processor and the display (col. 3, lines 49-50), and activating the controls responsive to a tap of a stylus on one of the controls (see col. 6, lines 54-55), a dwell of the stylus over one of the control input (col. 7, lines 50-57, where the pen leaving the surface can minimize the menu therefore allowing the pen to dwell on the surface allows the user to interactively maintain the display of the menu) and a stroke of the stylus on one of the controls (col. 7, lines 27-30, where the user makes a selection via a stroke input).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selker (US 2002/0122072) in view of Kurtenbach (US 5,689,667).

Regarding claim 10, Selker discloses an interface as recited in claim 1.

Selker fails to explicitly teach a marking menu associated with one of the controls having a layout where a downward stroke brings up additional tool palettes and/or dialogs.

Kurtenbach discloses a marking menu associated with one of the controls has a layout where a downward stroke brings up additional tool palettes and/or dialogs (see col. 3, lines 35-60, where a user can bring up a new sub-menu, which constitutes a dialog, by making a stroke towards a menu item but not lifting up the pen).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kurtenbach in the device of Selker

to have a commonly known method of bringing up an a pop-up menu with a single stroke for allowing additional controls of the menu to be utilized.

13. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keely, Jr. et al. (US 6,337,698) in view of Selker (US 2002/0122072) and further in view of Anderson et al. (US 5,828,360).

Regarding claim 15, Keely, Jr. et al. disclose a graphical user interface for a digitizer based drawing application, comprising: a semicircular graphic (Figs 10-12, the graphic shown is semicircular) located in a corner of a display area of the drawing based application associated with an end of a range of a natural user motion (see col. 7, lines 10-12, and as shown in Figure 10-12 the menu is placed responsive to the range of a user's natural motion to be able to select the menu items.); and controls located essentially in an arc in the graphic (Figs. 10-12, the controls are in an arc) where the arc is substantially perpendicular to a natural motion path of the natural motion (Figures 10-12 show that the menu arc is substantially perpendicular to the natural motion arc of the user.), said controls comprising:

a color control for selecting paint color applied by a drawing tool of the application (Figs. 10-12).

Keely, Jr. et al. fail to teach that the graphic is persistent.

Selker discloses of a graphical user interface wherein a persistent interface has an arc shape (Figure 2 and paragraph [0046] explain that the interface can be fixed, while Figure 2 shows that the menu has an arc shape.).

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made to make the interface taught by Keely, Jr. et al. be a fixed interface as taught by Selker et al. in order to provide for easy accessibility to the menu items used more frequently and to allow the user to constantly see the options of the menu.

Keely, Jr. et al. and Selker fail to teach different categories of menu items in an arc-shaped menu and having a tool control located adjacent to a minimize control that provides a menu for selecting a drawing tool, and the color control located adjacent the undo control.

Anderson et al. disclose different categories of menu items in an arc-shaped menu (Fig. 3) and a menu including a tool control that provides a menu for selecting a drawing tool (Fig. 3, item 31c, see col. 5 lines 13-28) where the menu item 31c provides the sub-menu shown in the figure with the different drawing tools).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Anderson et al. in the menu of Keely, Jr. et al. and Selker in order to have different types of menu items in an arc-shaped menu in order to add the extra functions provided by the menu items and so that these menu items would be easily accessible to hand movements that a user can make and remember easily (see Anderson col. 2, lines 1-3).

Regarding claim 16, Keely, Jr. et al., Selker and Anderson et al. disclose an interface as recited in claim 15.

Anderson also discloses an interface with a minimize control, an edit control providing an undo function (Fig. 3 shows an undo control included in the menu), and Keely, Jr. et al. also disclose a page control providing a page change function for drawing pages of the application (see col. 8, lines 46-51) and a tool type control and providing a menu for selection a tool type of the application (Fig. 8, 74, see col. 5, lines 53-54, where the select tool is a "tool type" control because it provides options for selecting tool types such as cut, copy, and paste).

However, Keely, Jr. et al., Selker and Anderson et al. fail to teach the relative locations of each control as discussed in the claim. However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to relocate the menu items as described in the claim since such a modification would have only involved a mere change in the location of the menu items. Applicants have not disclosed that the particular positioning of the menu items solves any stated problem, provides any advantage, or used for any particular purpose. Further, a change in location is generally recognized as being with the level of ordinary skill in the art, see *In re Japiske*, 86 USPQ 70 (CCPA 1950). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Keely, Jr. et al., Selker and Anderson et al. to obtain the invention as specified in the above claim.

Regarding claim 17, Keely, Jr. et al., Selker and Anderson et al. disclose an interface as recited in claim 16.

Keely, Jr. et al. also disclose an interface wherein the graphic comprises a semicircular band (Fig. 10).

14. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keely, Jr. et al. (US 6,337,698) in view of Selker (US 2002/0122072) and further in view of Anderson et al. (US 5,828,360) and Kurtenbach (US 5,689,667).

Regarding claim 18, Keely, Jr. et al., Selker and Anderson et al. disclose an interface as recited in claim 15.

Keely, Jr. et al., Selker and Anderson et al. fail to explicitly teach an interface wherein pop-up menus pop-up in association with the selected control and at a distance from side and bottom edges of the graphic to allow all menu commands to be displayed.

Kurtenbach does teach an interface wherein pop-up menus pop-up in association with the selected control and at a distance from side and bottom edges of the graphic to allow all menu commands to be displayed (Fig. 13, see col. 8, lines 1-11, where the pop-up allows all menu commands to be displayed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the pop-up menu icons of Kurtenbach in the interface of Keely, Jr. et al., Selker and Anderson et al. in order to be able to expand a small unreadable menu from a selection of such small menus into readable form.

Regarding claim 19, Keely, Jr. et al. disclose a graphical user interface for a tablet personal computer based drawing application using a stylus, comprising:

a semicircular graphic (Figs. 10-12) located in a corner of a display area of the drawing based application (see col. 7, lines 10-12) responsive to a natural motion by a user wherein the natural motion is a curve associated with movement of a hand of the user when an elbow of the user is pivoted (Fig. 10, line 142, see col. 6, lines 39-40, where a natural motion of a user is shown for selecting one of the menu items, and such a motion inherently involves the pivoting of the user's elbow) and associated with an end of a range of a natural user motion (As shown in Figure 10-12 the menu is placed responsive to the range of a user's natural motion to be able to select the menu items.); and

controls located essentially in an arc in the graphic (Figs. 10-12, the controls are formed in an arc) where the arc is substantially perpendicular to a natural motion path of the natural motion (Figures 10-12 show that the menu arc is substantially perpendicular to the natural motion arc of the user.) and activated by the stylus, said controls comprising:

a color providing a menu for selecting paint color applied by a tool of the application (Figs. 10-12); a page control providing a page change function for drawing pages of the application (see col. 8, lines 46-51);

a tool type control and providing a menu for selection a tool type of the application (Fig. 8, 74, see col. 5, lines 53-54, where the select tool is a "tool type"

control because it provides options for selecting tool types such as cut, copy, and paste);

wherein a radius of the arc shaped curve is at least a radius of a menu of one of the controls (Figs. 10-12, where the radius of the arc shaped curve is the radius of one of the menu choices),

wherein a control closest to a display area is positioned along the curve at least a radius of a menu of the control from a display edge (Figs. 10-12, where any of the controls along the curve, including the one closest to the display has at least the radius of the whole menu, meaning that if the menu is located in the corner it will have at least the radius of the menu of the control from a display edge.).

Keely, Jr. et al. fail to teach that the graphic is persistent.

Selker discloses of a graphical user interface wherein a persistent interface has an arc shape (Figure 2 and paragraph [0046] explain that the interface can be fixed, while Figure 2 shows that the menu has an arc shape.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to make the interface taught by Keely, Jr. et al. be a fixed interface as taught by Selker et al. in order to provide for easy accessibility to the menu items used more frequently and to allow the user to constantly see the options of the menu.

Keely, Jr. et al. and Selker fail to teach different categories of menu items in an arc-shaped menu and controls comprising:

a minimize control located on a side edge of the graphic and providing a minimize function for the interface;

a page control located adjacent a bottom edge of the graphic and providing a page change function for drawing pages of the application;

an undo control located adjacent to the page control and providing an undo function for the application;

a tool control located adjacent the minimize control and providing a menu for selecting a tool of the application;

a color control located adjacent the undo control and providing a menu for selecting paint color applied by a tool of the application; and

a tool type control located between the tool control and the color control and providing a menu for selection a tool type of the application; and

wherein a marking menu associated with one of the controls has a layout where a downward stroke brings up additional tool palettes and/or dialogs.

Anderson et al. disclose different categories of menu items in an arc-shaped menu (Fig. 3) and a menu including a tool control that provides a menu for selecting a drawing tool (Fig. 3, item 31c, see col. 5 lines 13-28) where the menu item 31c provides the sub-menu shown in the figure with the different drawing tools), a minimize control (Fig. 3, where the 'miniview' control is a type of minimize control), and an undo control (Fig. 3 shows an undo control included in the menu).

Anderson et al. fail to teach a marking menu associated with one of the controls has a layout where a downward stroke brings up additional tool palettes and/or dialogs.

Kurtenbach discloses a marking menu associated with one of the controls has a layout where a downward stroke brings up additional tool palettes and/or dialogs (see col. 3, lines 35-60, where a user can bring up a new sub-menu, which constitutes a dialog, by making a stroke towards a menu item but not lifting up the pen).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Anderson et al. and Kurtenbach in the menu of Keely, Jr. et al. and Selker in order to have different types of menu items in an arc-shaped menu so that these menu items would be easily accessible to hand movements that a user can make and remember easily (see Anderson col. 2, lines 1-3) and to have a commonly known method of bringing up a pop-up menu with a single stroke.

However, Keely, Jr. et al., Selker, Anderson et al. nor Kurtenbach teach the location of the tools relative to each other. However, at the time of the invention it would have been obvious to a person of ordinary skill in the art to relocate the menu items as described in the claim since such a modification would have only involved a mere change in the location of the menu items. Applicants have not disclosed that the particular positioning of the menu items solves any stated problem, provides any advantage, or used for any particular purpose. Further, a change in location is generally recognized as being within the level of ordinary skill in the art, see In re Japiske, 86 USPQ 70 (CCPA 1950). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Keely in view of

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Anderson and in further view of Kurtenbach to obtain the invention as specified in the above claim.

15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selker (US 2002/0122072) in view of Keely, Jr. et al. (US 6,337,698).

Regarding claim 22, Selker discloses a method as recited in claim 21.

Selker fails to teach wherein the corner is lower right corner for a left-handed person and a lower left corner for a right-handed person.

Keely, Jr. et al. disclose a graphical user interface located in a corner of a display wherein the corner is lower right corner for a left-handed person and a lower left corner for a right-handed person (Figs. 10-12, see col. 6, lines 45-54 and col. 7, lines 7-12, where it is clear that the menu goes in the lower right corner for a left-handed person and the lower left corner for a right-handed person).

Therefore, it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to made the interface graphic taught by Selker located in a left corner for a right handed user and a right corner for a left handed user as taught by Keely, Jr. et al. in order to allow for the maximum comfort of the user in operating the menu.

Allowable Subject Matter

16. Claim 26 is allowed.

17. The following is a statement of reasons for allowance:

Relative to independent claim 26, the major difference between the prior art of record (Selker, Keekly, Jr. et al., Ono, Anderson, and Kurtenbach) and the instant invention, is that said prior art does not teach a method wherein if a user is inking from a drawing canvas and the inking crosses into the menu, inking still occurs on the canvas.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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SS

3 July 2007

AMR A. AWAD
SUPERVISORY PATENT EXAMINER
